

# EXHIBIT N

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REDACTED IN ITS ENTIRETY**

# EXHIBIT O

<http://catless.ncl.ac.uk/Risks/>

# THE RISKS DIGEST

## Forum On Risks To The Public In Computers And Related Systems

**ACM Committee on Computers and Public Policy, Peter G. Neumann,  
moderator**

Search RISKS using swish-e

The RISKS Forum is a moderated digest. Its USENET equivalent is comp.risks. (Google/Deja news archive)

- Vol 24 Issue 33 (Tuesday 20 June 2006) <= Latest Issue
- Vol 24 Issue 32 (Wednesday 14 June 2006)
- Vol 24 Issue 31 (Monday 5 June 2006)
- News about the RISKS web pages
- Subscriptions, contributions and archives

You can monitor RISKS at Freshnews, Daily Rotation and probably other places too. The RISKS RDF feed is at <http://catless.ncl.ac.uk/rdigest.rdf>.

You can read RISKS via Mazingo, sitescooper, and AvantGo. For AvantGo channel creation use this URL. Please note that this is now a link to the AvantGo specific version of RISKS. For RISKS readers who use other mobile device software, the simplified and split version of the latest RISKS is available at: <http://catless.ncl.ac.uk/go/risks/latest>

To read Risks via WAP point your phone's browser at <http://catless.ncl.ac.uk/wap/risks/latest> to try it - let me know of any problems or feature requests. The wap service appears to work with some phones and not others, please tell me about your successes and failures, and anything you know about your phone.

Please report any problems you find to the website maintainer.

### Selectors for locating a particular issue from a volume

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## Volume Index

The dates and counts do not include the index issues for each volume.

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# EXHIBIT P

<http://web.archive.org/web/19961202165824/http://catless.ncl.ac.uk/Risks/15.79.html>



# The Risks Digest Volume 15: Issue 79

**Tuesday 26 April 1994**

**Forum on Risks to the Public in Computers and Related Systems**

*ACM Committee on Computers and Public Policy, Peter G. Neumann, moderator*

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Mich Kabay

\$14 million QA failure

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Peter Sommer

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Mark Brader

Dan Lanciani

Padgett Peterson

Info on RISKS (comp.risks), contributions, subscriptions, FTP, etc.

<http://web.archive.org/web/19961202165824/http://catless.ncl.ac.uk/Risks/15.79.html>

Michel E. Kabay, Ph.D. / Dir. Education / Natl Computer Security Assoc.

■

## Oakland posting for risks

*John Rushby <[RUSHBY@csl.sri.com](mailto:RUSHBY@csl.sri.com)>  
Sun 24 Apr 94 17:07:28-PDT*

Last chance to register for

1994 IEEE SYMPOSIUM ON RESEARCH IN SECURITY AND PRIVACY  
May 16-18, 1994  
Claremont Resort,  
Oakland, California

The program for this, the main conference on computer security research, was posted in RISKS-15.43, 30 Jan 1994. I won't repeat the whole thing, but here are the details of the very exciting panels that have been arranged. These were missing from the earlier posting.

Monday 2:00--3:30 PANEL: Firewalls

Moderator: Steve Kent (BBN)

Panelists: Steve Bellovin (AT&T) -- "Firewalls are good"  
Phil Karn (Qualcomm) -- "Firewalls are bad"

Tuesday 2:00--3:30 PANEL: What Security Needs To Learn From Other Fields

Moderator: Teresa Lunt

Panelists: Nancy Leveson (U. Washington) -- safety  
Fred Schneider (Cornell) -- dependability  
Jeffrey Voas (Reliable Software Technology) -- testing  
Brian Snow (NSA) -- security perspective

There's still time to register. The easiest way to get the program and registration form is by WWW from <http://web.archive.org/web/19961202165824/http://the.link.under.conferences>), or by anonymous ftp of the file /pub/oakland94.txt from ftp.csl.sri.com. If all else fails, send email requesting the form to John Rushby ([Rushby@csl.sri.com](mailto:Rushby@csl.sri.com)).

■

## Strange Stalking

*Flint Waters <[Flint.Waters@uwyo.edu](mailto:Flint.Waters@uwyo.edu)>  
Tue, 26 Apr 1994 14:00:00 +0000 (M)*

We just finished a pretty strange case.

A woman came in a reported that her estranged husband was stalking her. The officer that took the call started an investigation for the alleged stalking



<http://web.archive.org/web/19961202174220/http://catless.ncl.ac.uk/Risks/16.64.html>



# The Risks Digest Volume 16: Issue 64

Sat 10 December 1994

Forum on Risks to the Public in Computers and Related Systems

*ACM Committee on Computers and Public Policy, Peter G. Neumann, moderator*

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- German Telecom: technical risks/crime  
Klaus Brunnstein
- Info on RISKS (comp.risks), contributions, subscriptions, FTP, etc.

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## Re: Interesting product claim (more Pentium stuff)

"Paul N. Hilfinger" <[hilfingr@CS.Berkeley.EDU](mailto:hilfingr@CS.Berkeley.EDU)>  
Fri, 09 Dec 1994 16:31:47 -0800

Well, William Kahan informs me that

(1) Inmos used formal methods for the FP on the T800, but that they

<http://web.archive.org/web/19961202174220/http://catless.ncl.ac.uk/Risks/16.64.html>

Miriam Leeser Cornell University [mel@ee.cornell.edu](mailto:mel@ee.cornell.edu)

■

**Re: Formal verification of the AAMP5 (Rushby, RISKS-16.62)**

*srivas <[srivas@csl.sri.com](mailto:srivas@csl.sri.com)>  
Fri, 9 Dec 94 13:07:00 -0800*

[John Rushby was incorrect when he said that the AAMP5 did not have floating point. The following message from the authors of the cited report gives a more accurate summary of the project. PGN]

Recently, John Rushby sent a message to this forum giving a reference to a paper about an application of mechanized verification to a commercial microprocessor. I am giving below a summary of the work reported in the paper. For those interested in finding out more details about the project, the paper is available over the web through

<http://web.archive.org/web/19961202174220/http://www.csl.sri.com/aamp5.html>

or by ftp from

[ftp.csl.sri.com/pub/reports/postscript/aamp5.ps.gz](ftp://csl.sri.com/pub/reports/postscript/aamp5.ps.gz)

(Note that name of the ftp site has an "ftp" at its head.)

\*\*\*\*\*  
Formal Verification of AAMP5 Microprocessor:  
A Case Study in the Industrial Use of Formal Methods

Steve Miller  
Collins Commercial Avionics  
Rockwell International  
Cedar Rapids, Iowa 52498

Manadayam Srivas  
Computer Science Laboratory  
SRI International  
Menlo Park, CA 94025

The AAMP5 verification was a project conducted to explore how formal techniques for specification and verification could be introduced into an industrial process. Sponsored by the Systems Validation Branch of NASA Langley and Collins Commercial Avionics, a division of Rockwell International, it was conducted by Collins and the Computer Science Research Lab at SRI International. The project consisted of specifying in the PVS language developed by SRI a portion of a Rockwell proprietary microprocessor, the AAMP5, at both the instruction set and register-transfer levels and using the PVS theorem prover to show the microcode correctly implemented the specified behavior for a representative subset of instructions. The formal verification was performed in parallel with the development of the AAMP5 and did not replace any production verification activities.

The central result of this project was to demonstrate the feasibility of formally specifying a commercial microprocessor and the use of mechanical proofs of correctness to verify microcode. This is particularly significant since the AAMP5 was not designed for formal verification, but to provide a more than three-fold performance improvement while remaining object code compatible with the earlier AAMP2. As a consequence, the AAMP5 is one of the

<http://web.archive.org/web/19961202174658/http://catless.ncl.ac.uk/Risks/16.69.html>

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# The Risks Digest Volume 16: Issue 69

**Tuesday 3 January 1995**

**Forum on Risks to the Public in Computers and Related Systems**

*ACM Committee on Computers and Public Policy, Peter G. Neumann, moderator*

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- [Last call for papers for COMPASS 95](#)  
John Rushby
- [Info on RISKS \(comp.risks\), contributions, subscriptions, FTP, etc.](#)

## Gov't Recommends Electronic Copyright Restrictions (Edupage)

"Peter G. Neumann" <[neumann@csl.sri.com](mailto:neumann@csl.sri.com)>  
Tue, 3 Jan 95 14:12:52 PST

From Edupage, 27 Dec 1994:

### GOV'T RECOMMENDS ELECTRONIC COPYRIGHT RESTRICTIONS

The draft report on copyright law issued last July is drawing fire from some academics and librarians, who say it gives copyright holders too much power and "ought to maintain the balance that is maintained in the print

<http://web.archive.org/web/19961202174658/http://catless.ncl.ac.uk/Risks/16.69.html>

## **COBOL's Two-Character Year Field**

*Fred Ballard <[72400.1525@compuserve.com](mailto:72400.1525@compuserve.com)>*

*01 Jan 95 21:30:57 EST*

Stating the fact that COBOL has a default date format used in its special-registers bypasses the fact that COBOL has no date data type for the storing of dates (Freudian-slip, make that dates).

This has left the coders of the billions of lines of existing COBOL code free to invent as many date formats as human creativity will allow. In my reading, use, and maintaining of COBOL code in over twenty-six years of information system programming, this is a surprisingly large number.

This is one of the reasons "dusty deck" COBOL systems are such a problem as the year 2000 draws near. No assumptions can be made as to how dates are stored in COBOL-based systems and files. Also, the manipulation of a given format varies from one COBOL program to the next. There is no guarantee that any installation-wide modules are used for date manipulation. (Installation-wide is pretty much the best you can hope for; COBOL itself has no date manipulating modules.)

Actually, there is no guarantee that date routines will even be concentrated and re-used within a given COBOL program. Date processing is often scattered throughout the program, with each date variable having not only its own unique processing but different code for the same operations on a given date at different points in a program.

Obviously, some of this date code may contain errors. In many cases the errors are compensated for, consciously or unconsciously, by the program's developers or maintainers. So correcting a date computation at one point may lead to an error because the next use of the date has an existing correction for the previous error.

[Thanks to Fred, who also pointed out an error on Page 88 of my RISKS book, which should have read "COBOL uses a two-character YEAR field" (instead of DATE). Sorry! PGN]

## **Last call for papers for COMPASS 95**

*John Rushby <[RUSHBY@csl.sri.com](mailto:RUSHBY@csl.sri.com)>*

*Fri 30 Dec 94 12:08:49-PST*

Typeset copies of the CFP are available via anonymous ftp from [ftp.csl.sri.com](ftp://ftp.csl.sri.com) in /pub/compass95-cfp.{txt|tex|dvi|ps} and /pub/compass95-cfp-a4.{dvi|ps} or via WWW from <http://web.archive.org/web/19961202174658/http://www.csl.sri.com/compass>

CALL FOR PAPERS

<http://web.archive.org/web/19961202174658/http://catless.ncl.ac.uk/Risks/16.69.html>

# COMPASS '95

10th Annual IEEE Conference  
on COMPuTer ASSurance (COMPASS)

June 26--30, 1995  
Gaithersburg, MD USA

Sponsored by IEEE Aerospace and Electronic Systems Society  
and IEEE National Capital Area Council  
In cooperation with The British Computer Society

The purpose of this conference is to bring together researchers, developers, integrators, and evaluators who work on problems related to specifying, building, and certifying high-assurance, high-consequence computer systems. What distinguishes COMPASS from similar conferences is its emphasis on bridging the gap between research and practice. For researchers this provides an opportunity to present new results, theories, and techniques both to other researchers, and to practitioners who can put them to use. They can also learn from practitioners of issues and problems encountered in building real systems. Practitioners have an opportunity to share lessons learned, to hear of new research, and to influence future research directions.

The conference will be held at the National Institute of Standards and Technology in Gaithersburg, Maryland, which is a suburb of Washington DC (4 miles from the Shady Grove Metro Station). The proceedings will be published by the IEEE.

Papers should present advances in the theory, design, implementation, evaluation, or application of high-assurance systems, or report on experiments, evaluations, and open problems in the use of new technologies for computer assurance. Special consideration will be given to presentations (either single papers or paper pairs) by practitioners and researchers who have worked on the same problem. There will also be a tools fair and the conference will be preceded by one or two days of tutorials. Papers, panel session proposals, tutorial proposals, and tools fair proposals are solicited in relevant areas including the following:

Software Reliability	Software Safety	Computer Security
Formal Methods	Tools	Human-Computer Interfaces
Real-Time Systems	Networks	Embedded Systems
V&V Practices	Certification	Standards
Measurement and Metrics	Organization Theory	Lifecycle Processes

Representative application areas of interest include but are not limited to: communications, military systems, avionics, road and rail transport, space systems, nuclear and conventional power generation, plant and process control, and medical systems.

## INSTRUCTIONS TO AUTHORS:

Send five copies of your paper, panel session proposal, tutorial proposal, or tools fair proposal to John Rushby, Program Chair, at the address given below. Abstracts, electronic submissions, late submissions, overlength papers and papers that cannot be published in the proceedings will not be considered. Papers submitted from outside North America should be sent via overnight courier service or express mail. Exceptionally, authors in countries where copying or printing facilities are limited may submit a single copy in any form

<http://web.archive.org/web/19961202174658/http://catless.ncl.ac.uk/Risks/16.69.html>

available to them (including electronic mail).

Papers must be received by January 17, 1995 and must not exceed 7,500 words. Authors are responsible for obtaining prior to acceptance any and all necessary permissions and clearances for publication and are expected to present their paper in person if it is accepted. Authors will be notified of acceptance by March 14, 1995. Camera-ready copies are due not later than April 17, 1995.

Papers that describe use of technology presented at a previous COMPASS conference are eligible for a special award. Papers of exceptional quality and appropriate subject matter are eligible for inclusion in a special issue of the Journal of High Integrity Systems or the Journal of Computer Security.

Limited financial assistance will be available for student authors.

#### PROGRAM COMMITTEE

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Additional and typeset copies of this call for papers are available via anonymous ftp from <ftp.csl.sri.com> in /pub/compass95-cfp.{txt|tex|dvi|ps} or via WWW from <http://web.archive.org/web/19961202174658/http://www.csl.sri.com/compa>



<http://web.archive.org/web/19961205000914/http://catless.ncl.ac.uk/Risks/18.25.html>

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# The Risks Digest Volume 18: Issue 25

Friday 12 July 1996

Forum on Risks to the Public in Computers and Related Systems

ACM Committee on Computers and Public Policy, Peter G. Neumann, moderator

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## Western U.S. power blackout

"Peter G. Neumann" <[neumann@cs.sri.com](mailto:neumann@cs.sri.com)>  
Thu, 4 Jul 96 6:13:41 PDT

More than a dozen states including California, Oregon, Washington, Utah, Nevada, Wyoming, Arizona, reported power outages on 2 July 1996. At least 11 separate power plants "inexplicably were knocked off line". The problem appears to have originated at a 1500-megawatt intertie at the

<http://web.archive.org/web/19961205000914/http://catless.ncl.ac.uk/Risks/18.25.html>

California-Oregon border. Later in the day, plants in Rock Springs, Wyoming, and along the Colorado river also went off line. [Source: Reuters item, \*The Boston Globe\*, 3 July 1996, p.3]

On the following day, parts of Idaho were again blacked out. Perry Gruber, spokesman for the Bonneville Power Administration in Portland, Oregon, said, "We can rule out sabotage. We can rule out UFOs. I think we can rule out computer hackers." Utility officials said it may take as long as a week to find the cause(s). [Source: Associated Press item, \*The Boston Globe\*, 4 July 1996., p.4]

[Jerry Saltzer, who was in Idaho, remarked to me that what was most striking was the sheer confusion in reports of what might have been the cause. "AP reported without comment that eleven generating plants shut down simultaneously, with the apparent implication that some kind of widespread conspiracy was involved. Idaho Power said the problem originated in California, but its system autoshut down completely and had to go through a "Black Start". Oregon's main power company said it was a problem on the Pacific Northwest Intertie. Colorado's power company said the problem originated in their system but they didn't understand what it was. Idaho Power said it had nothing to do with the hot weather and unusual load from air conditioning. Oregon said it was caused by the hot weather and unusual load from air conditioning. Three days later they still didn't have any consensus on what had happened. Impressive disarray--one has the feeling that they don't talk to one another. With this much lack of communication, I'm not sure they should be allowed to interconnect, either." JHS]

■

### **Recent west-coast power outage and thoughts on the power grid**

"Nicholas C. Weaver" <[nweaver@CS.Berkeley.EDU](mailto:nweaver@CS.Berkeley.EDU)>  
Wed, 3 Jul 1996 12:56:00 -0700

[...] At least 1.5 million customers were affected by sporadic outages. Apparently an instability in the power grid caused these problems. (It is interesting how sporadic these outages were. In Berkeley, our power wasn't interrupted, yet portions of the Bay Area subway system (BART) were without power).

Other contributors can no doubt explain better than I can how such instabilities occur, but I would rather address a more frightening thought: Can such instabilities be deliberately introduced? Could someone actively sabotage the power-grid in this way?

This outage didn't cause much damage. After all, it was during the day and hot and miserable, so a few million people were simply made uncomfortable. But what would happen to LA if a California wide blackout occurred at say, 11pm on Dec. 31st?

One might also wonder if other portions of our energy infrastructure are similarly vulnerable to attack?

[nweaver@cs.berkeley.edu](mailto:nweaver@cs.berkeley.edu) <http://web.archive.org/web/19961205000914/http://www.cs.berke>

[The answer to your first and third questions is unfortunately YES,



<http://web.archive.org/web/19961205000914/http://catless.ncl.ac.uk/Risks/18.25.html>

and transcend the energy infrastructure. The Senate Governmental Affairs Committee Permanent Subcommittee on Investigations, chaired by Senator Nunn, has been holding hearings that include this very topic. My testimony from 25 June is available for FTP (in PostScript form only at the moment) from [ftps.csl.sri.com](ftp://ftps.csl.sri.com) in the file `pub/neumannSenate.PS` . PGN]

### **Massive cell-phone identifier interception**

*"Peter G. Neumann" <[neumann@csl.sri.com](mailto:neumann@csl.sri.com)>  
Thu, 4 Jul 96 8:13:41 PDT*

Two people in Brooklyn NY (Abraham Romy and Irina Bashkavich) were charged with stealing over 80,000 cellular phone numbers, along with corresponding identifying serial numbers and personal identification numbers, using a scanner (digital data interceptor) from their 14th-floor windowsill above the Belt Parkway in Brooklyn. Police seized two handguns, six computers, 43 cellular phones, and the scanner. Cellular-phone fraud reportedly amounts to losses of \$1.5 million per day. [Source: An Associated Press item in \*The New York Times\*, 3 July 1996, p. B4]

### **56-Bit Encryption Is Vulnerable, Says Zimmermann (Edupage)**

*Edupage Editors <[educum@elanor.oit.unc.edu](mailto:educum@elanor.oit.unc.edu)>  
Sun, 30 Jun 1996 18:01:43 -0400 (EDT)*

Philip Zimmermann, creator of Pretty Good Privacy encryption software, testified before a Senate subcommittee that, based on a 1993 presentation by Michael Wiener of Northern Telecom, it would be possible to build a machine for \$1 million that could crack a message encrypted with the Data Encryption Standard and a 56-bit key in an average of 3.5 hours. A more powerful machine, costing about \$10 million, could do it in 21 minutes, and a \$100 million machine could bring the time down to two minutes. Zimmermann's testimony contradicted a recent statement by U.S. Attorney General Janet Reno that even with a "top of the line supercomputer, decoding a 56-bit key would take over a year and the evidence would be long gone." At issue is whether the U.S. should permit the general-license export of 56-bit encryption products. (BNA Daily Report for Executives 27 Jun 1996, A5, in Edupage, 30 June 1996)

### **John Munden is acquitted at last!**

*Ross Anderson <[Ross.Anderson@cl.cam.ac.uk](mailto:Ross.Anderson@cl.cam.ac.uk)>  
Mon, 08 Jul 1996 18:26:10 +0100*

# EXHIBIT Q

**THIS EXHIBIT HAS BEEN  
REDACTED IN ITS ENTIRETY**

# EXHIBIT R

## **The EMERALD Project**

**Current Downloads as of  
(9/4/97)**

- |                |   |
|----------------|---|
| January 5 1997 | <u>EMERALD: Conceptual Overview Statement (1.5 pgs)</u>   |
| Sept. 4 1997   | <ul style="list-style-type: none"><li>• <u>EMERALD: Event Monitoring Enabling Responses to Anomalous Live Disturbances (To appear in the 1997 National Information Systems Security Conference)</u> (HTML)</li><li>• <u>EMERALD: Event Monitoring Enabling Responses to Anomalous Live Disturbances (To appear in the 1997 National Information Systems Security Conference)</u> (Postscript)</li></ul> |
| Nov. 10 1997   | <ul style="list-style-type: none"><li>• <u>Live Traffic Analysis of TCP/IP Gateways (HTML)</u></li><li>• <u>Live Traffic Analysis of TCP/IP Gateways (To appear in the 1998 Internet Society Symposium on Network and Distributed System Security, March 1998)</u> (Postscript)</li></ul>   |

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## Frequently Asked Questions

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### Questions

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### The Wayback Machine

**How can I get my site included in the Archive?**

Alexa Internet has been crawling the web since 1996, which has resulted in a massive archive. If you have a web site, and you would like to ensure that it is saved for posterity in the Internet Archive, and you've searched wayback and found no results, you can visit the Alexa's "Webmasters" page at <http://pages.alexa.com/help/webmasters/index.html#crawl> site.

Method 2: If you have the Alexa tool bar installed, just visit a site.

Method 3: while visiting a site, use the 'show related links' in Internet Explorer, which uses the Alexa service.

Sites are usually crawled within 24 hours and no more than 48. Right now there is a 6-12 month lag between the date a site is crawled and the date it appears in the Wayback Machine.

**How can I remove my site's pages from the Wayback Machine?**

The Internet Archive is not interested in preserving or offering access to Web sites or other Internet documents of persons who do not want their materials in the collection. By placing a simple robots.txt file on your Web server, you can exclude your site from being crawled as well as exclude any historical pages from the Wayback Machine.

Internet Archive uses the exclusion policy intended for use by both academic and non-academic digital repositories and archivists. See our [exclusion policy](#).

You can find exclusion directions at [exclude.php](#). If you cannot place the robots.txt file, opt not to, or have further questions, email us at [info@archive.org](mailto:info@archive.org).

**What is the Internet Archive Wayback Machine?**

The Internet Archive Wayback Machine is a service that allows people to visit archived versions of Web sites. Visitors to the Wayback Machine can type in a URL, select a date range, and then begin surfing on an archived version of the Web. Imagine surfing circa 1999 and looking at all the Y2K hype, or revisiting an older version of your favorite Web site. The Internet Archive Wayback Machine can make all of this possible.

**Can I link to old pages on the Wayback Machine?**

Yes! The Wayback Machine is built so that it can be used and referenced. If you find an archived page that you would like to reference on your Web page or in an article, you can copy the URL. You

**Wayback Machine made?**

can even use fuzzy URL matching and date specification.... but that's a bit more advanced.

**How large is the Wayback Machine?****Why isn't the site I'm looking for in the archive?**

Some sites may not be included because the automated crawlers were unaware of their existence at the time of the crawl. It's also possible that some sites were not archived because they were password protected, blocked by robots.txt, or otherwise inaccessible to our automated systems. Siteowners might have also requested that their sites be excluded from the Wayback Machine. When this has occurred, you will see a "blocked site error" message. When a site is excluded because of robots.txt you will see a "robots.txt query exclusion error" message.

**What type of machinery is used in this Internet Archive?****What does it mean when a site's archive data has been "updated"?****How do you archive dynamic pages?**

When our automated systems crawl the web every few months or so, we find that only about 50% of all pages on the web have changed from our previous visit. This means that much of the content in our archive is duplicate material. If you don't see "\*\*\*\*\*" next to an archived document, then the content on the archived page is identical to the previously archived copy.

**Why are some sites harder to archive than others?****Who was involved in the creation of the Internet Archive Wayback Machine?**

"The original idea for the Internet Archive Wayback Machine began in 1996, when the Internet Archive first began archiving the web. Now, five years later, with over 100 terabytes and a dozen web crawls completed, the Internet Archive has made the Internet Archive Wayback Machine available to the public. The Internet Archive has relied on donations of web crawls, technology, and expertise from Alexa Internet and others. The Internet Archive Wayback Machine is owned and operated by the Internet Archive."

**Some sites are not available because of robots.txt or other exclusions. What does that mean?****How was the Wayback Machine made?**

Alexa Internet, in cooperation with the Internet Archive, has designed a three dimensional index that allows browsing of web documents over multiple time periods, and turned this unique feature into the Wayback Machine.

**How can I help the Internet Archive and the Wayback Machine?****How large is the Wayback Machine?**

The Internet Archive Wayback Machine contains almost 2 petabytes of data and is currently growing at a rate of 20 terabytes per month. This eclipses the amount of text contained in the world's largest libraries, including the Library of Congress.

**Can I search the Archive?****What type of machinery is used in this Internet Archive?****Why am I getting broken or gray images on a site?**

Much of the Internet Archive is stored on hundreds of slightly modified x86 servers. The computers run on the Linux operating system. Each computer has 512Mb of memory and can hold just over 1 Terabyte of data on ATA disks. However we are developing a new way of storing our data on a smaller machine. Each machine will store 1 terabyte. For more information go to [www.petabox.org](http://www.petabox.org).

**How do I contact the Internet Archive?****How do you archive dynamic pages?**

There are many different kinds of dynamic pages, some of which are easily stored in an archive and some of which fall apart completely. When a dynamic page renders standard html, the archive works beautifully. When a dynamic page contains forms, JavaScript, or other elements that require interaction with the originating host, the archive will not contain the original site's functionality.

**What is the Wayback Machine's Copyright Policy?****Why are some sites harder to archive than others?**

If you look at our collection of archived sites, you will find some broken pages, missing graphics, and some sites that aren't archived at all. Here are some things that make it difficult to archive a web site:

**Why is the Internet Archive**

these clear up within two weeks.

**Robots.txt Query Exclusion:** A robots.txt is something that a site owner puts on their site that keeps crawlers like our own from crawling them. The Internet Archive retroactively respects all robots.txt.

**Blocked Site Error:** Site owners, copyright holders and others who fit Internet Archive's exclusion policy have requested that the site be excluded from the Wayback Machine. For exclusion criteria, please see our [exclusion policy](#) (we use the same one used and developed by other digital repositories and archivists both academic and non-academic).

**Path Index Error:** A path index error message refers to a problem in our database wherein the information requested is not available (generally because of a machine or software issue, however each case can be different). We cannot always completely fix these errors in a timely manner.

**Not in Archive:** Generally this means that the site archived has a redirect on it and the site you are redirected to is not in the archive or cannot be found on the live web.

#### **Why are there no recent archives in the Wayback Machine?**

We do not add pages less than 6 months after they are collected, because of the time delayed donation from Alexa. Updates can take up to 12 months in some cases.

There is no access to files before they appear in the Wayback Machine.

#### **How does the Wayback Machine behave with Javascript turned off?**

If you have Javascript turned off, images and links will be from the live web, not from our archive of old Web files.

#### **How did I end up on the live version of a site? or I clicked on X date, but now I am on Y date, how is that possible?**

Not every date for every site archived is 100% complete. When you are surfing an incomplete archived site the Wayback Machine will grab the closest available date to the one you are in for the links that are missing. In the event that we do not have the link archived at all, the Wayback Machine will look for the link on the live web and grab it if available. Pay attention to the date code embedded in the archived url. This is the list of numbers in the middle; it translates as `yyyymmddhhmmss`. For example in this url <http://web.archive.org/web/20000229123340/http://www.yahoo.com/> the date the site was crawled was Feb 29, 2000 at 12:33 and 40 seconds.

#### **Questions**

**How can I add a thumbnail image to my item's details page?**

**What is the Live Music Archive all about?**

**I noticed a recording I uploaded and marked for 'no lossy formats'**

#### **Audio**

#### **How can I add a thumbnail image to my item's details page?**

First, make sure you're logged on to archive.org with the same email address you used to upload the item.

The image you upload must be named *identifier.jpg* (where *identifier* is your item's identifier name) and it must have the file format tag JPEG.

To upload the image:

- Go to your item's details page
- Click the "Edit item" link in the lower left box
- Click the Item Manager button
- Click the "Check out files" button

# EXHIBIT V



Enter Web Address:

All

Take Me Back

[Adv. Search](#) [Compare Archiv](#)

Searched for <http://www.csl.sri.com/intrusion.html>

33 Results

\* denotes when site was updated.

### Search Results for Jan 01, 1996 - Jun 30, 2006

1996	1997	1998	1999	2000	2001	2002	2003
0 pages	1 pages	2 pages	1 pages	3 pages	5 pages	9 pages	6 pages
	<a href="#">Jul 05, 1997</a> *	<a href="#">Jan 24, 1998</a> <a href="#">Dec 05, 1998</a> *	<a href="#">Apr 28, 1999</a>	<a href="#">Apr 09, 2000</a> * <a href="#">Aug 15, 2000</a> <a href="#">Oct 26, 2000</a>	<a href="#">Apr 07, 2001</a> * <a href="#">Jun 19, 2001</a> <a href="#">Aug 16, 2001</a> * <a href="#">Nov 12, 2001</a> <a href="#">Dec 01, 2001</a>	<a href="#">Feb 08, 2002</a> <a href="#">Jun 03, 2002</a> <a href="#">Aug 11, 2002</a> * <a href="#">Oct 03, 2002</a> * <a href="#">Oct 12, 2002</a> <a href="#">Nov 11, 2002</a> * <a href="#">Nov 25, 2002</a> <a href="#">Dec 02, 2002</a> <a href="#">Dec 09, 2002</a>	<a href="#">Feb 11, 2003</a> F <a href="#">Apr 12, 2003</a> f <a href="#">Jun 05, 2003</a> f <a href="#">Aug 10, 2003</a> J <a href="#">Nov 28, 2003</a> C <a href="#">Dec 03, 2003</a>

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Enter Web Address:

All

Take Me Back

Adv. Search Compare Archiv

Searched for <http://www.csl.sri.com/emerald/downloads.html>

24 Results

\* denotes when site was updated.

### Search Results for Jan 01, 1996 - Jun 30, 2006

1996	1997	1998	1999	2000	2001	2002	2003	2004
0	0	2 pages	0	3 pages	5 pages	5 pages	4 pages	4 pages
pages	pages		pages					
	<a href="#">Jan 24, 1998</a> *		<a href="#">May 20, 2000</a> *	<a href="#">Mar 03, 2001</a> *	<a href="#">Jun 30, 2002</a> *	<a href="#">Jan 10, 2003</a>	<a href="#">Feb 02, 2004</a>	
	<a href="#">Dec 03, 1998</a> *		<a href="#">Aug 15, 2000</a>	<a href="#">Apr 19, 2001</a> *	<a href="#">Oct 12, 2002</a> *	<a href="#">Feb 01, 2003</a>	<a href="#">Apr 05, 2004</a>	
			<a href="#">Aug 16, 2000</a> *	<a href="#">Jun 19, 2001</a>	<a href="#">Oct 19, 2002</a>	<a href="#">Oct 05, 2003</a>	<a href="#">Jun 11, 2004</a>	
				<a href="#">Aug 16, 2001</a> *	<a href="#">Nov 11, 2002</a> *	<a href="#">Dec 11, 2003</a>	<a href="#">Oct 21, 2004</a>	
				<a href="#">Dec 22, 2001</a>	<a href="#">Nov 27, 2002</a>			

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## 2128 "Printed Publications" as Prior Art - 2100 Patentability

### 2128 "Printed Publications" as Prior Art

#### A REFERENCE IS A "PRINTED PUBLICATION" IF IT IS ACCESSIBLE TO THE PUBLIC

A reference is proven to be a "printed publication" "upon a satisfactory showing that such document has been disseminated or otherwise made available to the extent that persons interested and ordinarily skilled in the subject matter or art, exercising reasonable diligence, can locate it." *In re Wyer*, 655 F.2d 221, 210 USPQ 790 (CCPA 1981) (quoting *I.C.E. Corp. v. Armco Steel Corp.*, 250 F. Supp. 738, 743, 148 USPQ 537, 540 (SDNY 1966)) ("We agree that 'printed publication' should be approached as a unitary concept. The traditional dichotomy between 'printed' and 'publication' is no longer valid. Given the state of technology in document duplication, data storage, and data retrieval systems, the 'probability of dissemination' of an item very often has little to do with whether or not it is 'printed' in the sense of that word when it was introduced into the patent statutes in 1836. In any event, interpretation of the words 'printed' and 'publication' to mean 'probability of dissemination' and 'public accessibility' respectively, now seems to render their use in the phrase 'printed publication' somewhat redundant.") *In re Wyer*, 655 F.2d at 226, 210 USPQ at 794.

See also *Carella v. Starlight Archery*, 804 F.2d 135, 231 USPQ 644 (Fed. Cir. 1986) (Starlight Archery argued that Carella's patent claims to an archery sight were anticipated under 35 U.S.C. 102(a) by an advertisement in a Wisconsin Bow Hunter Association (WBHA) magazine and a WBHA mailer prepared prior to Carella's filing date. However, there was no evidence as to when the mailer was received by any of the addressees. Plus, the magazine had not been mailed until 10 days after Carella's filing date. The court held that since there was no proof that either the advertisement or mailer was accessible to any member of the public before the filing date there could be no rejection under 35 U.S.C. 102(a).).

#### ELECTRONIC PUBLICATIONS AS PRIOR ART

Status as a "Printed Publication"

An electronic publication, including an on-line database or Internet publication, is considered to be a "printed publication" within the meaning of 35 U.S.C. 102(a) and (b) provided the publication was accessible to persons concerned with the art to which the document relates. See *In re Wyer*, 655 F.2d 221, 227, 210 USPQ 790, 795 (CCPA 1981) ("Accordingly, whether information is printed, handwritten, or on microfilm or a magnetic disc or tape, etc., the one who wishes to characterize the information, in whatever form it may be, as a 'printed publication' \* \* \* should produce sufficient proof of its dissemination or that it has otherwise been available and accessible to persons concerned with the art to which the document relates and thus most likely to avail themselves of its contents." (citations omitted)). See also *Amazon.com v. Barnesandnoble.com*, 73 F. Supp. 2d 1228, 53 USPQ2d 1115, 1119 (W.D. Wash. 1999) (Pages from a website were relied on by defendants as an anticipatory reference (to no avail), however status of the reference as prior art was not challenged.); *In re Epstein*, 32 F.3d 1559, 31 USPQ2d 1817 (Fed. Cir. 1994) (Database printouts of abstracts which were not themselves prior art publications were properly relied as providing evidence that the software products referenced therein were "first installed" or "released" more than one year prior to applicant's filing date.).

The Office policy requiring recordation of the field of search and search results (see MPEP § 719.05) weighs in favor of finding that Internet and on-line database references cited by the examiner are "accessible to persons concerned with the art to which the document relates and thus most likely to avail themselves of its contents." *Wyer*, 655 F.2d at 221, 210 USPQ at 790. Office copies of an electronic document must be retained if the same document may not be available for retrieval in the future. This is especially important for sources such as the Internet and online databases.

#### **Date of Availability**

Prior art disclosures on the Internet or on an on-line database are considered to be publicly available as of the date the item was publicly posted. If the publication does not include a publication date (or retrieval date), it cannot be relied upon as prior art under 35 U.S.C. 102(a) or (b), although it may be relied upon to provide evidence regarding the state of the art. Examiners may ask the Scientific and Technical Information Center to find the earliest date of publication. See MPEP § 901.06(a), paragraph IV. G.

#### **Extent of Teachings Relied Upon**

An electronic publication, like any publication, may be relied upon for all that it would have reasonably suggested to one having ordinary skill in the art. See MPEP § 2121.01 and § 2123. Note, however, that if an electronic document which is the abstract of a patent or printed publication is relied upon in a rejection under 35 U.S.C. 102 or 103, only the text of the abstract (and not the underlying document) may be relied upon to support the rejection. In situations where the electronic version and the published paper version of the same or a corresponding patent or printed publication differ appreciably, each may need to be cited and relied upon as independent references based on what they disclose.







**Internet Usage Policy**

See MPEP § 904.02(c) for the portions of the Internet Usage Policy pertaining to Internet searching and documenting search strategies. See MPEP § 707.05 for the proper citation of electronic documents.

**EXAMINER NEED NOT PROVE ANYONE ACTUALLY LOOKED AT THE DOCUMENT**

One need not prove someone actually looked at a publication when that publication is accessible to the public through a library or patent office. See *In re Wyer*, 655 F.2d 221, 210 USPQ 790 (CCPA 1981); *In re Hall*, 781 F.2d 897, 228 USPQ 453 (Fed. Cir. 1986).

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